

**Notice of Allowability**

Application No.

09/772,759

Examiner

Truc T. Chuong

Applicant(s)

KUMAR ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/05/05.
2. ☒ The allowed claim(s) is/are 1-51.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

BA HUYNH  
PRIMARY EXAMINER

### EXAMINER'S AMENDMENT AND REASONS FOR ALLOWANCE

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Joel Wall on 10/13/05.

2. The claims have been amended as follows:

1. (currently amended) A method of presenting to a user a visual representation of a frame laid out in a matrix of blocks, each block laid out in a matrix of pins, the frame resident at a central office of a telecommunications system, the method comprising:  
maintaining in a database data describing the frame, including (a) data uniquely identifying blocks in the frame, and (b) data describing a current condition of the frame, including data indicating which pins in the frame are currently in use and which pins in the frame are currently available for use wherein the database identifies blocks in the frame using a triple for each identified block, the triple indicating for each identified block a module, a shelf within the module and a block within the shelf in a case where the frame is a single-sided frame and a side, a vertical coordinate and a horizontal coordinate in a case where the frame is a double-sided frame;

accessing the database to determine a current condition of the frame;

displaying, based on the accessed data, a graphical representation of the frame, the graphical representation including a visual indication of the current condition of the frame including a visual indication of a plurality of pins currently in use and a visual indication of a plurality of pins available for use; and

allowing a user to interface with the graphical representation to effect a mapping between available pins on the frame and telecommunications lines leading to and from the frame.

2. (original) A method according to claim 1, wherein the displaying step displays the graphical representation of the frame in response to the user specifying a particular frame from a particular central office in the telecommunications system.

3. (original) A method according to claim 2, wherein the frame is made up of constituent blocks and the displaying step may display a particular block from a specified frame in response to the user's entry of coordinates for the block.

4. (original) A method according to claim 1, wherein the allowing step further allows the user to modify attributes of the selected frame.

5. (original) A method according to claim 1, wherein the graphical representation of the frame displayed at the displaying step includes a first Web page showing a frame of a selected central office laid out as a matrix of constituent blocks.

6. (original) A method according to claim 5, wherein the graphical representation of the frame displayed at the displaying step includes a second Web page showing available pins on any block in the matrix, and allows the user to search for a block having a number of available pins entered by the user.

7. (previously presented) A method according to claim 6, wherein the allowing step allows the user to assign a jumper from a port on a switching card to an available pin.

8. (original) A method according to claim 1, further comprising the step of allowing the user to add a new frame at a selected central office of the telecommunications system.

9. (original) A method according to claim 8, wherein the user can specify a number of modules, shelves, and blocks per shelf for an added new frame.

10. (currently amended) A program storage device having computer-readable code embedded therein for a host computer on a network, the host computer being operable to communicate with a client computer on the network and having access to a database of information relating to one or more frames laid out in a matrix of blocks, each block laid out in a

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matrix of pins, the one or more frames located at telecommunications system central offices, the code comprising:

code for processing requests from the client computer for data relating to one or more frames;

code for initiating database interface code, the database interface code retrieving the requested data from the database, the database maintaining data describing one or more frames, including (a) data uniquely identifying blocks in the one or more frames, and (b) data describing a current condition of the one or more frames, including data indicating which pins in the one or more frames are currently in use and which pins in the one or more frames are currently available for use, ~~the requested data including data indicating which pins in the one or more frames are currently in use and which pins in the one or more frames are available for use~~ wherein the database identifies blocks in the one or more frames using a triple for each identified block, the triple indicating for each identified block a module, a shelf within the module and a block within the shelf in a case where the frame is a single-sided frame and a side, a vertical coordinate and a horizontal coordinate in a case where the frame is a double-sided frame;

code for formatting a graphical representation of a current condition of the one or more frames in the request, the graphical representation including a visual indication of a plurality of pins currently in use and a visual indication of a plurality of pins ~~on~~ available for use; and

code for communicating the formatted graphical representation of the one or more frames to the client computer and for allowing a user of the client computer to interface

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with the graphical representation to effect a mapping between available pins on the one or more frames and telecommunications lines leading to and from the one or more frames.

11. (original) A program storage device according to claim 10, wherein the code further comprises the database interface code, and the database interface code comprises a common gateway interface (CGI) application.

12. (original) A program storage device according to claim 10, wherein the code further comprises the database interface code, and the database interface code comprises a Java servlet.

13. (original) A program storage device according to claim 10, wherein the graphical representation of the frame is generated in response to the user specifying a particular frame from a particular central office in the telecommunications system.

14. (original) A program storage device according to claim 13, wherein the frame is made up of constituent blocks and the graphical representation of the frame may show a particular block from a specified frame in response to the user's entry of coordinates for the block.

15. (original) A program storage device according to claim 10, wherein the code for communicating further allows the user to modify attributes of the selected frame.

16. (original) A program storage device according to claim 10, wherein the graphical representation of the frame includes a first Web page showing a frame of a selected central office laid out as a matrix of constituent blocks.

17. (original) A program storage device according to claim 16, wherein the graphical representation of the frame includes a second Web page showing available pins on any block in the matrix, and allowing the user to search for a block having a number of available pins entered by the user.

18. (previously presented) A program storage device according to claim 17, wherein the code for communicating allows the user to assign a jumper from a port on a switching card to an available pin.

19. (original) A program storage device according to claim 10, further comprising code for allowing the user to add a new frame at a selected central office of the telecommunications system.

20. (original) A program storage device according to claim 19, wherein the user can specify a number of modules, shelves, and blocks per shelf for an added new frame.

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21. (currently amended) A server computer on a network, the server computer having access to a database of information relating to one or more frames laid out in a matrix of blocks, each block laid out in a matrix of pins, the one or more frames located at telecommunications central offices, the server computer being operable to:

communicate with a client computer on the network;

process requests from the client computer for data relating to one or more frames including data indicating which pins in the one or more frames are currently in use and which pins in the one or more frames are available for use;

initiate database interface code, the database interface code retrieving the requested data from the database, the database maintaining data describing the one or more frames, including (a) data uniquely identifying blocks in the one or more frames and (b) data describing a current condition of the one or more frames, including data indicating which pins in the one or more frames are currently in use and which pins in the one or more frames are currently available for use wherein the database identifies blocks in the one or more frames using a triple for each identified block, the triple indicating for each identified block a module, a shelf within the module and a block within the shelf in a case where the frame is a single-sided frame and a side, a vertical coordinate and a horizontal coordinate in a case where the frame is a double-sided frame;

format a graphical representation of a current condition of the one or more frames in the request, the graphical representation including a visual indication of a plurality of pins currently in use and a visual indication of a plurality of pins available for use; and



communicate the formatted graphical representation of the one or more frames to the client computer and allow a user of the client computer to interface with the graphical representation to effect a mapping between available pins on the one or more frames and telecommunications lines leading to and from the one or more frames.

22. (original) A server according to claim 21, wherein the database interface code comprises a common gateway interface (CGI) application.

23. (original) A server according to claim 21, wherein the database interface code comprises a Java servlet.

24. (original) A server according to claim 21, wherein the graphical representation of the frame is generated in response to the user specifying a particular frame from a particular central office in the telecommunications system.

25. (original) A server according to claim 24, wherein the frame is made up of constituent blocks and the graphical representation of the frame shows a particular block from a specified frame in response to the user's entry of coordinates for the block.

26. (original) A server according to claim 21, wherein the server is further operable to allow the user to modify attributes of the selected frame.

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27. (original) A server according to claim 21, wherein the graphical representation of the frame includes a first Web page showing a frame of a selected central office laid out as a matrix of constituent blocks.

28. (original) A server according to claim 27, wherein the graphical representation of the frame includes a second Web page showing available pins on any block in the matrix, and allowing the user to search for a block having a number of available pins entered by the user.

29. (previously presented) A server according to claim 28, wherein the server is operable to allow the user to assign a jumper from a port on a switching card to an available pin.

30. (original) A server according to claim 21, the server further being operable to allow the user to add a new frame at a selected central office of the telecommunications system.

31. (original) A server according to claim 30, wherein the user can specify a number of modules, shelves, and blocks per shelf for an added new frame.

32. (currently amended) A program storage device having embedded therein computer code for a client computer on a network, the code comprising:

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code for communicating with a server on the network, the server having access to a database of information relating to one or more frames located at telecommunications central offices, each frame laid out in a matrix of blocks, each block laid out in a matrix of pins, the database maintaining data describing the one or more frames, including (a) data uniquely identifying blocks in the one or more frames, and (b) data describing a current condition of the one or more frames, including data indicating which pins in the one or more frames are currently in use and which pins in the one or more frames are available for use wherein the database identifies blocks in the one or more frames using a triple for each identified block, the triple indicating for each identified block a module, a shelf within the module and a block within the shelf in a case where the frame is a single-sided frame and a side, a vertical coordinate and a horizontal coordinate in a case where the frame is a double-sided frame;

code for sending requests to the server for information relating to one or more frames, the requests causing the server to initiate execution of database interface code, the database interface code retrieving the requested data from the database and formatting a graphical representation of a current condition of the one or more frames in the request, the graphical representation including a visual indication of a plurality of pins currently in use and a plurality of pins available for use;

code for receiving the formatted graphical representation of the one or more frames from the server, the received graphical representation allowing a user of the client computer to interface with the graphical representation to effect a mapping between available pins on the one or more frames and telecommunications lines leading to and from the one or more frames.

33. (previously presented) A program storage device according to claim 32, wherein the graphical representation of the frame includes a first Web page showing a frame of a selected central office laid out as a matrix of constituent blocks.

34. (previously presented) A program storage device according to claim 33, wherein the graphical representation of the frame includes a second Web page showing available pins on any block in the matrix, and allowing the user to search for a block having a number of available pins entered by the user.

35. (previously presented) A program storage device according to claim 34, wherein the received graphical representation allows the user to assign a jumper from a port on a switching card to an available pin.

36. (previously presented) A program storage device according to claim 32, wherein the received graphical representation allows the user to add a new frame at a selected central office of the telecommunications system.

37. (previously presented) A program storage device according to claim 36, wherein the user can specify a number of modules, shelves, and blocks per shelf for an added new frame.

38. (currently amended) An apparatus for presenting to a user a visual representation of a frame laid out in a matrix of blocks, each block laid out in a matrix of pins, the frame resident at a central office of a telecommunications system, the apparatus comprising:

means for accessing a database maintaining data describing the frame, including (a) data uniquely identifying blocks in the frame, and (b) data describing a current condition of the frame, including data indicating which pins in the frame are currently in use and which pins in the frame are available for use wherein the database identifies blocks in the frame using a triple for each identified block, the triple indicating for each identified block a module, a shelf within the module and a block within the shelf in a case where the frame is a single-sided frame and a side, a vertical coordinate and a horizontal coordinate in a case where the frame is a double sided-frame;

means for displaying, based on the accessed data, a graphical representation of the frame, the graphical representation including a visual indication of the current condition of the frame including a visual indication of a plurality of pins currently in use and a visual indication of a plurality of pins available for use; and

means for allowing a user to interface with the graphical representation to effect a mapping between available pins on the frame and telecommunications lines leading to and from the frame.

39. (original) An apparatus according to claim 38, wherein the displaying step displays the graphical representation of the frame in response to the user specifying a particular frame from a particular central office in the telecommunications system.

40. (original) An apparatus according to claim 39, wherein the frame is made up of constituent blocks and the means for displaying may display a particular block from a specified frame in response to the user's entry of coordinates for the block.

41. (original) An apparatus according to claim 38, wherein the means for allowing is further operable to allow the user to modify attributes of the selected frame.

42. (original) An apparatus according to claim 38, wherein the graphical representation of the frame displayed by the means for displaying includes a first Web page showing a frame of a selected central office laid out as a matrix of constituent blocks.

43. (original) An apparatus according to claim 42, wherein the graphical representation of the frame displayed by the means for displaying includes a second Web page showing available pins on any block in the matrix, and allows the user to search for a block having a number of available pins entered by the user.

44. (previously presented) An apparatus according to claim 43, wherein the means for allowing allows the user to assign a jumper from a port on a switching card to an available pin.

45. (original) An apparatus according to claim 38, further comprising means for allowing the user to add a new frame at a selected central office of the telecommunications system.

46. (original) An apparatus according to claim 45, wherein the user can specify a number of modules, shelves, and blocks per shelf for an added new frame.

47. (previously presented) A method according to claim 6, wherein the allowing step allows the user to assign a jumper from an available pin to an outside plant feeder.

48. (previously presented) A program storage device according to claim 17, wherein the code for communicating allows the user to assign a jumper from an available pin to an outside plant feeder.

49. (previously presented) A server according to claim 28, wherein the server is operable to allow the user to assign a jumper from an available pin to an outside plant feeder.

50. (previously presented) A program storage device according to claim 34, wherein the received graphical representation allows the user to assign a jumper from an available pin to an outside plant feeder.

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51. (previously presented) An apparatus according to claim 43, wherein the means for allowing allows the user to assign a jumper from an available pin to an outside plant feeder.

52-56. (canceled)

*Allowable Subject Matter*

3. Claims 1-51 are allowed.

4. The following is an examiner's statement of reasons for allowance in combination with other claim limitations:

Independent claims 1, 10, 21, 32, and 38, when considered as a whole, are allowable over the Prior Art of record. Specifically, the Prior Art of record fails to teach the server computer on the network having access to the database of information relating to one or more frames laid out in the matrix of blocks, each block laid out in the matrix of pins, the one or more frames located at telecommunications central offices, the server communicates with the client computer on the network, processes requests from the client computer for data relating to one or more frames including data indicating which pins in one or more frames are currently in use and which pins are available for use, initiates database interface code, the database interface code retrieving the requested data from the database, the database maintaining data describing the one or more frames, including data uniquely identifying blocks in the one or more frames and data describing the current condition of the one or more frames, including data indicating which pins in the one or more frames are currently in use and which pins in the one or more frames are available for



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use wherein the database identified blocks in the one or more frames using the triple for each identified block, the triple indication for each identified block the module, the shelf within the module and the block within the shelf in the case where the frame is the single-sided frame and the side, the vertical coordinate and the horizontal coordinate in the case where the frame is the double-sided frame, formats the graphical representation of the current condition of the one or more frames in the request, the graphical representation including the visual indication of the plurality of pins currently in use and the visual indication of the plurality of pins available for use, and communicates the formatted graphical representation of the one or more frames to the client computer and allows the user of the client computer to interface with the graphical representation to effect the mapping between available pins on the one or more frames and telecommunications lines leading to and from the one or more frames.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Truc T. Chuong whose telephone number is 571-272-4134. The examiner can normally be reached on M-Th and alternate Fridays 8:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Truc T. Chuong

10/14/05

  
BA HUYNH  
PRIMARY EXAMINER